

IN THE SPECIFICATION:

Kindly amend paragraph [0050] as follows.

a¹ [0050] The LCD driving apparatus includes a liquid crystal display panel 67 having a plurality of data lines 65 and gate lines 66 crossing each other and having ~~TFT's~~ TFTs provided at the intersections therebetween to drive liquid crystal cells Clc. A data driver 63 supplies data to the data lines 65 of the liquid crystal display panel 67. A gate driver 64 supplies a scanning pulse to the gate lines 66 of the liquid crystal display panel 67. A timing controller 61 receives digital video data and horizontal and vertical synchronizing signals H and V. A data modulator 62 is connected between the timing controller 61 and the data driver 63 to modulate data RGB using an approximation ~~to~~ of the predetermined modulated data.

Kindly amend paragraph [0055] as follows.

a² [0055] The data modulator 62 modulates current input data RGB using a look-up table in accordance with a change between the previous frame Fn-1 and the current frame Fn. Further, the data modulator 62 derives a minute modulation value ~~between~~ of the modulated data registered in the look-up table using an approximation to better modulate current input data RGB. Herein, a data width of the look-up table may equalize to that of the most significant bits MSB. However, it is preferable that it equalizes to a data width (i.e., 8 bits) of the source data RGB.

Kindly amend paragraph [0060] as follows.

a³ [0060] The look-up table 74 compares the most significant bits MSB of the current frame Fn inputted from the most significant bit bus line 72 of the timing controller 61 with those

of the previous frame F_{n-1} inputted from the frame memory 73. In accordance with the compared result, the look-up table 74 selects a desired data size of modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ from the modulated data a, b, c, and d satisfying the following equations:

$VD_n < VD_{n-1} \rightarrow MVD_n < VD_n \quad \dots (i)$

$VD_n = VD_{n-1} \rightarrow MVD_n = VD_n \quad \dots (ii)$

$VD_n > VD_{n-1} \rightarrow MVD_n > VD_n \quad \dots (iii)$

Kindly amend paragraph [0064] as follows.

[0064] Gray scale ranges of the source data RGB unregistered in the look-up data, such as gray scale data of 1~15, 17~31, 33~47, 49~63, 65~78, 81~95, 97~111, 113~127, 129~143, 145~159, 161~175, 177~191, 193~207, 209~223, 225~239, and 241~254, are derived by registering modulated data within the look-up table 74 and carrying out an approximation between the most adjacent two gray scales. In comparison to this scheme, the conventional scheme determines a gray scale range unregistered in the look-up table 74 on the basis of the least significant bits LSB added to the modulated data selected from the look-up table 74. The modulated data band to be approximated according to a preferred embodiment of the present invention is a data area between a range of gray level values in the horizontal direction and a range of gray level values in the vertical direction with respect to the look-up table 74 (shown as the data area within the dashed lines in FIG. 9) adjacent to the registered modulated data adjacent to the horizontal and vertical directions having gray level values that are the most approximate to gray level values of the source data RGB.

Kindly amend paragraphs [0068]-[0070] as follows.

Q5
cont

[0068] Referring to FIG. 8, in step S81, the most significant bits MSB and the least significant bits LSB of the previous frame F_{n-1} delayed by the first and second frame memories 73A and 73B, respectively, are read out. In step S82, the most significant bits MSB and the least significant bits LSB of the current frame F_n are read out. In step S83, modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ corresponding to the source data RGB within the look-up table 74 ~~are is~~ derived in accordance with the most significant bits MSB of the current frame F_n and those of the previous frame F_{n-1} read out in this manner. ~~These~~ The modulated data band Band(a, b, c, d) ~~is bands a, b, c, and d~~ are data ranges between four modulated data a, b, c, and d ~~a, b, c, and d~~ that is most approximate to a modulated data value corresponding to the most significant bits MSB inputted to the look-up table 74 as shown in FIG. 9.

[0069] In step S84, the first approximation processor 75 carries out the first approximation using values of the least significant bits LSB of the current frame F_n within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ to derive two first approximate values A1 and A2 that are vertically opposite to each other within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~. The first approximation is carried out along the X-axis within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ with respect to the look-up table 74 as shown in FIG. 9.

[0070] In step S85, the second approximation processor 76 carries out a secondary approximation using values of the least significant bits LSB of the previous frame F_{n-1} within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ to derive the modulated data X at the vertical line between the two first approximate values A1 and A2. The secondary

a5 cond. approximation is carried out along the Y-axis within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ with respect to the look-up table 74 as shown in FIG. 9.

Kindly amend paragraphs [0080]-[0082] as follows.

a6 cont. [0080] Referring to FIG. 11, in step S111, the most significant bits MSB and the least significant bits LSB of the previous frame Fn-1 delayed by the first and second frame memories 103A and 103B, respectively, are read out. The most significant bits MSB and the least significant bits LSB of the current frame Fn are read out in step S112. In step S113, modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ corresponding to the source data RGB within the look-up table 104 ~~are~~ is derived in accordance with the most significant bits MSB of the current frame Fn and the previous frame Fn-1 read out in this manner. The modulated data band Band(a, b, c, d) ~~is bands a, b, c, and d~~ are data ranges between four modulated data a, b, c, and d ~~a, b, c, and d~~ that is most approximate to modulated data values corresponding to the most significant bits MSB inputted to the look-up table 104 as source data as shown in FIG. 12.

[0081] In step S114, the first approximation processor 105 carries out the first approximation using values of the least significant bits LSB of the previous frame Fn-1 within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ to derive two first approximate values B1 and B2 that are horizontally opposite to each other within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~. The first approximation is carried out along the Y-axis within the modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~, with respect to the look-up table 104 as shown in FIG. 12.

[0082] In step S115, the second approximation processor 106 carries out the second approximation using values of the least significant bits LSB of the current frame Fn within the

modulated data ~~bands~~ band Band(a, b, c, d) ~~a, b, c, and d~~ undergoing an approximation to derive

modulated data X on the horizontal line between the two first approximate values B1 and B2.

ab
concl. This second approximation is carried out along the X-axis within the modulated data ~~bands~~ band

Band(a, b, c, d) ~~a, b, c, and d~~ with respect to the look-up table 104 undergoing an approximation,

as shown in FIG. 12.
